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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,167	07/11/2001	Kenichiro Suetsugu	43888-112	7945
20277	7590	02/22/2005	EXAMINER	
MCDERMOTT WILL & EMERY LLP			PHAN, THIEM D	
600 13TH STREET, N.W.			ART UNIT	
WASHINGTON, DC 20005-3096			PAPER NUMBER	
			3729	
DATE MAILED: 02/22/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/889,167

Applicant(s)

SUETSUGU ET AL.

Examiner

Tim Phan

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-8, 11-14 and 21 is/are pending in the application.  
4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 6-8, 14 and 21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The amendment filed on 12/27/04 has been fully considered and made of record.

#### ***Title***

2. The following title is suggested: "An Article Having Circuit with Parts Soldered by Lead Free Solder".

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-8, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao et al (JP07-326834) hereinafter '834 in view of Nakatsuka et al (US 5,942,185) hereinafter '185 or vice versa.

**As applied to claim 6**, the '834 teaches an article or printed circuit board imprinted with displayed codes (Cf. Drawing 1, 2; Abstract) such as bar code 2 (Cf. Abstract; Detailed Description, Paragraph 8, line 1) with 5 different digits (first 2 digits, second 3 digits, ..., fifth 8 digits) where the first digits identify or mark an absolute magnitude number (Cf. Detailed Description, Paragraphs 8 & 9, Table 1) from 5 (heavily lead doped) to 0 which is judged to be lead free for land burying (Cf. Detailed Description, Paragraph 8, line 6), where the motivation is to simplify the recycling of used parts (Cf. Paragraph 21).

The '185 teaches a lead free solder with information about different compositions that are low in cost, stably supplied or available to the PCB industry and do not damage the environment (Cf. Abstract).

It would be obvious to one of ordinary skill in the art at the time the invention was made to combine the two teachings by applying the information of the lead free solder as taught by the '185 to the bar code of the '834, in order to speed up and simplify the recycling of used parts without harming the environment.

**As applied to claim 7**, the '834 and '185 teach a bar code (Cf. Detailed Description, Paragraph 8, line 1) imprinted on the printed circuit board, with critical information for recycling, including materials or parts or soldered parts used on-board (Cf. Detailed Description, Paragraph 19, lines 7-10) except for detailing the type of solder.

It would be obvious to one of ordinary skill in the art at the time the invention was made to add the type of solder, its temperature range, its mechanical strength, its toxicity, etc... since it

was known in the art that a bar code can easily carry tons of information due to its digital combination structure, including the information about different level of lead through the absolute magnitude number 0 to 5 (Cf. Detailed Description, Paragraph 8, lines 4-6; Paragraph 9, Table 1) and the information about the lead-free solder composition taught by the '185.

**As applied to claims 8 and 21**, the '834 teaches a bar code or labeling (Cf. Detailed Description, Paragraph 8, line 1) imprinted on the printed circuit board for information about recycling the board, except for having the bar code or identification information imprinted on the housing which accommodates the printed circuit board or article.

The '185 teaches a lead free solder with information about different compositions that are low in cost, stably supplied or available to the PCB industry and do not damage the environment (Cf. Abstract).

It would be obvious to one of ordinary skill in the art at the time the invention was made to combine the two teachings by applying the information of the lead free solder as taught by the '185 to the bar code or labeling of the '834, and have it imprinted on the housing which accommodates the printed circuit boards or articles or have it imprinted to the box carrying these housings or the trucks, the trains or boats, etc ... carrying these boxes in order to speed up and simplify the recycling of used parts without harming the environment.

**As applied to claim 14**, the '834 teaches that the identification information is the bar code 2 with the first digits of recognizable "absolute magnitude" markings from 0 to 5 (Cf.

Detailed Description, Paragraph 8; Paragraph 9, Table 1) and it is well known and obvious to one of ordinary skill in the art to recognize that any bar-code display always has a numerical sequence underneath and recognizable by a human as a back-up so that the data information can be retrieved when the bar-scanner fails.

### ***Response to Arguments***

5. Applicants' arguments filed 12/27/04 have been fully considered but they are not persuasive for the following reasons:

Applicants' remarks "... '834 having a magnitude greater than « 0 » can be indicating the presence of heavy metals *other than lead* such as Sn, Bi, Au, Ag, etc ... **and the Examiner has not provided any evidence as to why this is not possible.**" (Cf. Remarks, page 5, lines 14-16). This is gratuitous since Sn, Bi, ... are not claimed and the claims (Claims 6-8 & 21) in the invention involve the information or identification of lead in the article and the prior art, '834, does indeed teach the information or identification of lead in the article through the first digits of the bar code (Cf. Abstract, bottom paragraph).

Applicants cite that the International Preliminary Examination Report (IPER) acknowledges that the prior art, '834, does not suggest the features in the claims (Cf. Remarks, page 6, 2<sup>nd</sup> paragraph; pages 10-15, PCT- IPER). Applicants' arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable

invention without specifically pointing out how the language of the claims patentably distinguishes them from the references of the '834 and '185.

Moreover Applicants urge that "... the allegation is based entirely on improper hindsight reasoning." (Cf. Remarks, page 7, lines 5 ff.). In response to applicants' argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Furthermore, Applicants' recitations about mere fact of combining references, which does not render the combination obvious is not persuasive (Cf. Remarks, page 8). In response to applicants' argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both prior art, the '834 and '185, have their utmost motivation or goal or recycling used parts and avoid harming the environment, specially by the presence of lead heavily used in the electronics industry.

***Conclusion***


6. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.


Applicants' amendment necessitate the new grounds of rejection presented in this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M - F, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Tim Phan  
Examiner  
Art Unit 3729  
tp  
February 15, 2005

  
CARL J. ARBES  
PRIMARY EXAMINER